

# COGMP7

## Inspect and verify bulk storage measurement systems



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### Overview

This unit is about your contribution to the inspection and verification of measuring devices used to account for bulk movements of fluids.

This unit deals with the following:

- 1 Inspecting and verifying primary bulk storage devices
- 2 Inspecting and verifying secondary bulk storage devices

During this work you must take account of the relevant operational requirements and safe working practices AS THEY APPLY TO YOU.

### Previous Version:

Unit 7 National Occupational Standards in Measurement Processes – May 2003

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### Performance criteria

- You must be able to:*
- P1 effectively notify all relevant personnel of your intention to carry out the inspection
  - P2 effectively isolate, remove, inspect and verify the Primary Device against approved procedures and standards
  - P3 effectively re-instate the Primary Device
  - P4 follow the appropriate procedures should the Primary Liquid be unsuitable for re- installation
  - P5 accurately complete all relevant documentation
  - P6 properly handle calibration equipment
  - P7 work safely and in accordance with operational requirements
  - P8 effectively isolate, remove, inspect and verify the Secondary Device against approved procedures and standards
  - P9 effectively re-instate the Secondary Device
  - P10 follow the appropriate procedures should the Secondary Device be unsuitable for re-installation

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### Knowledge and understanding

*You need to know and understand:*

- K1 why and when to bring about safe isolation and de-isolation
- K2 how to handle the device to be inspected and/or verified
- K3 how to carry out the inspection and verification
- K4 the operating principles of the Primary Device
- K5 what to do if the primary device is unsuitable for re-instatement
- K6 installation requirements and limitations and their effects upon the performance of the primary device
- K7 where and how to apply correction
- K8 the impact of ill defined interface, to include vapour/liquid and liquid/liquid
- K9 the principles and practice of static pressure effects
- K10 the operating principles of the Secondary Device
- K11 how to carry out the inspection, to include visual checks, power supply checks, configuration violation checks and damage check
- K12 what to do if the Secondary Device is unsuitable for re-instatement

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### Additional Information

#### Scope/range related to knowledge and understanding

- 1 how to select, use and care for Personal Protective Equipment (PPE) including sight/hearing protection, gloves, footwear, hard hats and appropriate work wear
- 2 the implications of statutory and organisational requirements
- 3 how to interpret operational requirements e.g. policies, procedures, instructions, codes of practice, standards and schedules
- 4 who to inform that you are going to carry out the inspection e.g. plant management staff
- 5 the principles and practice of measurement. To include errors, accuracy and precision isolation techniques
- 6 the differences between inspection and verification
- 7 the documentation relevant to inspection and verification and how to complete it effectively
- 8 how to access and interpret information from certificates of calibration and standards
- 9 device handling techniques
- 10 the traceability of test equipment
- 11 the meaning of the measurement terminology. To include errors, accuracy, precision and uncertainty.
- 12 the sources and treatment of errors and mis-measurement within metering system
- 13 the role of statutory and regulatory bodies and the implications on the owner of the stored materials
- 14 the origins and use of calibration tables
- 15 the applicable limits of measurement accuracy for fiscal and custody transfer
- 16 how to access, interpret and use relevant information. To include tank/vessel calibration tables, correction factors and standards
- 17 the terminology used in tank content measurement
- 18 device calibration methods and considerations

### Glossary

Within this context, the Primary Device is defined as those components which bring about the detection of the fluid interface or interfaces and convert this into a form suitable for onward transmission to the secondary device(s).

A Secondary Device is defined as that assembly of components which brings about the:

- 1 Primary Device selection (manually and/or automatically)
- 2 Validation and processing of the data transmitted from the Primary Device
- 3 Temporary storage of the measurement results for onward transmission to the secure data archival and reconciliation system(s)

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